

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/DE 03/02671

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04B10/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 100 49 769 A (KOREA INST SCIENCE TECHNOLOGY) 6 September 2001 (2001-09-06) abstract page 2, line 34 -page 3, line 28 figure 7	1
Y	US 5 917 649 A (KOGA MASAFUMI ET AL) 29 June 1999 (1999-06-29) abstract column 15, line 60 -column 17, line 15 figure 11	1
A	US 5 677 781 A (AIDA KAZUO ET AL) 14 October 1997 (1997-10-14) abstract column 12, line 1 - line 62 figure 7	1,13,14
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

13 January 2004

Date of mailing of the international search report

19/01/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Hadziefendic, I

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/DE 03/02671

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 923 290 A (OTTO RAINER J R W ET AL) 8 May 1990 (1990-05-08) abstract column 2, line 8 - line 20 column 2, line 59 - line 66 figure 2 -----	1,13,14

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DE 03/02671

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
DE 10049769	A	06-09-2001	KR	2001037296 A	07-05-2001
			DE	10049769 A1	06-09-2001
			JP	2001168813 A	22-06-2001
			US	6671045 B1	30-12-2003
US 5917649	A	29-06-1999	JP	3272934 B2	08-04-2002
			JP	9214035 A	15-08-1997
			DE	19704545 A1	21-08-1997
			FR	2744570 A1	08-08-1997
			GB	2310096 A ,B	13-08-1997
US 5677781	A	14-10-1997	JP	3462938 B2	05-11-2003
			JP	9018391 A	17-01-1997
			DE	19612408 A1	09-01-1997
US 4923290	A	08-05-1990	DE	3728107 A1	02-03-1989
			DE	3877659 D1	04-03-1993
			EP	0304994 A2	01-03-1989
			JP	1113721 A	02-05-1989